

Application No. 10/612,892
Amendment under 37 CFR 1.111
Reply to Office Action dated November 18, 2004
February 18, 2005

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): A clamping device for a machine tool, comprising:

a fixed bed having a mounting surface;

a movable carriage movably mounted on the ~~fixed bed~~ mounting surface;

a stationary fitting member fixed to the fixed bed and having a wedge surface extending in a direction of movement of the movable carriage, ~~the stationary fitting member having a wedge surface tilted downwardly~~;

a movable fitting member provided on the movable carriage, the movable fitting member being movable ~~between an extended position and a retracted position in a direction transverse to the direction of movement of the movable carriage~~ in a direction substantially perpendicular to the mounting surface, the movable fitting member further having a wedge surface ~~complementary~~ which is substantially parallel to the wedge surface of the stationary

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fitting member; and

a driving mechanism for moving the movable fitting member between an extended position where the movable fitting member engages the stationary fitting member to clamp the movable carriage to the fixed bed and a retracted position where the movable fitting member is disengaged from the stationary fitting member to release the movable carriage.

Claim 2 (Currently amended): The clamping device for a machine tool according to claim 1, wherein the stationary fitting member and the movable fitting member are a stationary rack and a movable rack, respectively, each having rack teeth formed on the ~~fitting~~ wedge surface for the engagement with each other.

Claim 3 (Original): The clamping device for a machine tool according to claim 2, wherein the fixed bed has a recessed portion in which a ball screw for moving the movable carriage is disposed, and the stationary rack is fixed to a stepped portion formed on a shoulder portion of the recessed portion.

Claim 4 (Original): The clamping device for a machine tool according to claim 1, wherein the driving mechanism is a cylinder

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mechanism.

Claim 5 (Original): The clamping device for a machine tool according to claim 4, wherein the cylinder mechanism is an oil cylinder having a piston-return spring.

Claim 6 (Currently amended): The clamping device for a machine tool according to claim 1, wherein the movable carriage is provided with a backup member for ~~supporting the surface opposite to the wedge surface~~ contacting a front side face of the movable fitting member which is on an opposite side of the movable fitting member from the wedge surface.

Claim 7 (Currently amended): A clamping device for a machine tool, comprising:

a movable carriage movably mounted on a fixed bed and clamped to a specified position on the fixed bed;

a stationary fitting member fixed to the fixed bed and extending in a direction of movement of the movable carriage, the stationary fitting member having a wedge surface tilted downwardly;

a movable fitting member provided on the movable carriage,

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the movable fitting member being movable between an extended position and a retracted position in the direction transverse to the direction of movement of the movable carriage, the movable fitting member further having a wedge surface complementary to the wedge surface of the stationary fitting member;

a driving mechanism for moving the movable fitting member between an extended position where the movable fitting member engages the stationary fitting member to clamp the movable carriage to the fixed bed and a retracted position where the movable fitting member is disengaged from the stationary fitting member to release the movable carriage; and

a backup member provided at the bottom of the movable carriage for ~~supporting a surface opposite to the wedge surface~~ contacting a front side face of the movable fitting member which is on an opposite side of the movable fitting member from the wedge surface.

Claim 8 (Currently amended): A machine tool comprising:

a fixed bed having a mounting surface and a recessed portion in which a ball screw for moving a movable carriage is disposed, wherein the movable carriage is movably disposed on the mounting surface by a means for mounting the movable carriage to the

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mounting surface;

a stationary fitting member fixed to the fixed bed and extending in a direction of movement of the movable carriage, the stationary fitting member being fixed to the fixed bed at a shoulder of the recessed portion of the fixed bed and having a wedge surface ~~tilted downwardly;~~

a movable fitting member provided on the movable carriage, the movable fitting member being movable ~~between an extended position and a retracted position~~ in a direction ~~transverse to the direction of movement of the movable carriage~~ substantially perpendicular to the mounting surface of said fixed bed, the movable fitting member further having a wedge surface ~~complementary to the wedge surface of the stationary fitting member~~ extending parallel to the wedge surface of said stationary fitting member; and

a driving mechanism having a longitudinal axis for moving the movable fitting member between an extended position where the movable fitting member engages the stationary fitting member to clamp the movable carriage to the fixed bed and a retracted position where the movable fitting member is disengaged from the stationary fitting member to release the movable carriage, wherein the movable fitting member is disposed such that the

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wedge surface of the movable fitting member is disposed to form
an acute angle with the longitudinal axis of the driving
mechanism; and

a backup member provided at the bottom of the movable
carriage for ~~supporting a surface opposite to the wedge surface~~
contacting a front side face of the movable fitting member which
is on an opposite side of the movable fitting member from the
wedge surface.

Claim 9 (Currently amended): The machine tool according to
claim 8, wherein the stationary fitting member and the movable
fitting member are a stationary rack and a movable rack,
respectively, each having rack teeth formed on the ~~fitting~~ wedge
surface for the engagement with each other.

Claim 10 (Currently amended): The ~~clamping device for a~~
machine tool according to claim 8, wherein the driving mechanism
is a cylinder mechanism.